

Claims

- 1 1. Protective circuit, in particular for overvoltage protection for an electronic  
2 control system for a motor vehicle, comprising:  
3 - a potential converter with an input and an output, which supplies a supply voltage  
4 when fed an external voltage,  
5 - a control unit, which is connected electrically to the supply voltage and to earth,  
6 - a first switch unit, which monitors the external voltage and, when a predetermined  
7 voltage threshold value is exceeded, generates a control signal at an input of the  
8 control unit, and  
9 - a second switch unit, which is part of the control unit and switches in one or more  
10 loads at least partially in response to the control signal at the input.
- 1 2. Protective circuit according to Claim 1, wherein one switched in load is the  
2 control unit, with this being switched from idle mode to operating mode.
- 1 3. Protective circuit according to Claim 1, wherein the second switch unit  
2 switches in a further load, when a control signal is present at the input and the control  
3 unit is already in operating mode.
- 1 4. Protective circuit according to Claim 1, wherein the first switch unit comprises  
2 a transistor stage, which is connected electrically to the input of the control unit.
- 1 5. Protective circuit according to Claim 1, wherein the further load is supplied  
2 with energy by the potential converter.
- 1 6. Protective circuit according to Claim 4, wherein the transistor stage comprises  
2 a transistor whose load path is coupled in series with a diode and a resistor.
- 1 7. Protective circuit according to Claim 6, wherein the transistor stage is coupled  
2 with the input of the potential converter.

1 8. Protective circuit according to Claim 7, wherein the transistor is a bipolar  
2 transistor whose base is coupled with the output of the potential converter, whose  
3 emitter is coupled with the diode, and whose collector is coupled with the control  
4 unit.

1 9. Protective circuit according to Claim 1, wherein the potential converter is a  
2 DC-DC converter.

1 10. Protective circuit according to Claim 1, wherein the control unit is a  
2 microprocessor unit.

- 1 11. Method for operating a protective circuit, comprising the steps:
  - 2 - monitoring an input voltage of a potential converter by a switch unit,
  - 3 - if the voltage exceeds a predetermined threshold voltage, then generating a control
  - 4 signal at an input of a control unit, in response to which the control unit switches in
  - 5 one or more loads at least partially.
- 1 12. Method according to Claim 11, wherein
  - 2 when the predetermined threshold voltage is exceeded, the control unit is switched
  - 3 from idle mode to operating mode.
- 1 13. Method according to Claim 11, wherein
  - 2 when the predetermined threshold voltage is exceeded, a further load is switched in, if
  - 3 the control unit is already in operating mode and/or the monitored voltage requires
  - 4 this.